CUMBERLAND RIVER BASIN

03433640 COPPERAS BRANCH NEAR KINGFIELD, TN

LOCATION.--Lat 35°54'19", long 87°05'56", Williamson County, Hydrologic Unit 05130204, on right bank 350 ft upstream from confluence with Kelley Creek, 3.6 mi southwest from Kingfield, 1.75 mi northwest from Flagpole Hill.

DRAINAGE AREA.--1.62 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 2004 to September 2005.

GAGE.--Data collection platform and crest-stage gage.

REMARKS .-- Records good.

EXTREMES FOR PERIOD OF RECORDS.--Maximum discharge, 263 ft³/s, Oct. 19, 2004; maximum gage height, 3.48 ft, Oct. 19, 2004.

EXTREMES FOR WATER YEARS 2004-2005.--

Water Year 2004: Maximum discharge, 99 ft³/s, May 15; gage height, 2.28 ft, minimum daily discharge, 0.97 ft³/s, Sept. 21, 22.

Water Year 2005: Maximum discharge, 263 ft³/s, Oct. 19; gage height, 3.48 ft, minimum daily discharge, 1.0 ft³/s, Oct. 1, 5, 6.

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004 DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|--------------|--------------|--------------|--------------|--------------|---|--|--|--|--|--|--|
| 1 2 3 4 5 | | | | | | 10 6.6 3.6 2.9 7.4 | 2.2 2.0 1.9 1.8 1.7 | 3.6 5.4 4.0 3.6 3.4 | 2.6 2.3 2.3 2.2 2.2 | 3.2 2.1 1.9 1.8 1.6 | 1.3 1.2 1.2 1.2 2.5 | 1.1 2.1 1.2 1.2 1.1 |
| 6 7 8 9 10 | | | | | | 8.0 3.9 3.0 2.6 2.2 | 1.7 1.7 1.7 1.6 1.6 | 3.2 3.0 2.9 2.8 2.9 | 2.1 2.1 2.1 2.0 1.9 | 1.8 2.4 1.8 1.6 2.0 | 1.3 1.2 1.2 1.2 1.2 | 1.1 1.1 1.1 1.1 1.1 |
| 11 12 13 14 15 | | | | | | 2.1 1.9 1.8 1.8 1.8 | 1.6 6.2 8.1 6.3 4.9 | 2.8 3.1 3.6 3.3 15 | 1.9 2.9 2.8 2.3 2.0 | 1.7 1.6 1.7 2.0 1.6 | 1.3 1.3 1.2 1.2 1.1 | 1.1 1.3 1.1 1.0 1.0 |
| 16 17 18 19 20 | | | | | | 1.9 1.8 1.8 1.7 2.6 | 4.3 4.0 3.7 3.5 3.4 | 5.2 4.1 3.6 3.3 3.0 | 2.0 2.0 2.1 2.0 1.9 | 1.6 1.5 1.4 1.4 1.4 | 1.1 1.1 1.1 1.0 1.3 | 1.6 1.4 1.0 1.00 0.99 |
| 21 22 23 24 25 | | | | | | 2.5 2.1 2.0 1.9 1.8 | 3.5 15 7.7 11 6.3 | 2.8 2.7 2.6 2.5 2.4 | 1.9 1.8 1.7 1.7 1.9 | 1.4 1.3 1.3 1.3 4.3 | 1.1 1.1 1.1 1.1 1.1 | 0.97 0.97 0.98 0.99 0.99 |
| 26 27 28 29 30 31 | | | | | | 1.8 1.8 1.7 4.0 3.0 2.5 | 4.9 4.2 3.8 3.6 3.5 | 2.4 2.4 2.3 2.2 2.2 6.7 | 1.7 1.7 1.7 1.7 2.0 | 2.5 1.6 1.4 1.3 1.2 | 1.1 1.2 1.2 1.2 1.2 1.2 | 0.98 1.0 1.0 1.0 1.0 |
| TOTAL MEAN MAX MIN CFSM IN. | | | | | | 94.5 3.05 10 1.7 1.88 2.17 | 127.4 4.25 15 1.6 2.62 2.93 | 113.0 3.65 15 2.2 2.25 2.59 | 61.5 2.05 2.9 1.7 1.27 1.41 | 55.4 1.79 4.3 1.2 1.10 1.27 | 37.7 1.22 2.5 1.0 0.75 0.87 | 33.57 1.12 2.1 0.97 0.69 0.77 |
| STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY) | | | | | | | | | | | | |
| MEAN MAX (WY) MIN (WY) | | | | | | 3.05 3.05 (2004) 3.05 (2004) | 4.25 4.25 (2004) 4.25 (2004) | 3.65 3.65 (2004) 3.65 (2004) | 2.05 2.05 (2004) 2.05 (2004) | 1.79 1.79 (2004) 1.79 (2004) | 1.22 1.22 (2004) 1.22 (2004) | 1.12 1.12 (2004) 1.12 (2004) |

03433640 COPPERAS BRANCH NEAR KINGFIELD, TN—Continued

DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005 DAILY MEAN VALUES

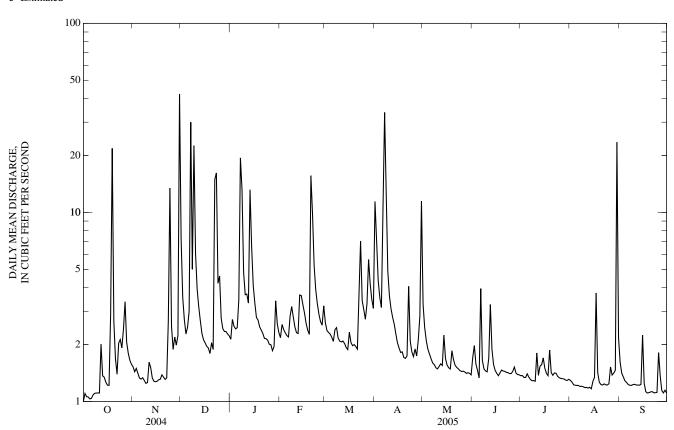
| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|--|--------------------------------|--|--|---------------------------------|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------|---------------------------------|
| 1 | 1.0 | 1.5 | 7.2 | 2.1 | 2.2 | 2.6 | 11 | 3.3 | 1.7 | 1.4 | 1.3 | 1.6 |
| 2 | 1.1 | 1.4 | 3.5 | 2.7 | 2.6 | 2.4 | 7.1 | 2.5 | 2.0 | 1.4 | 1.3 | 1.4 |
| 3 | 1.1 | 1.5 | 2.7 | 2.5 | 2.4 | 2.3 | 4.4 | 2.1 | 1.6 | 1.3 | 1.2 | 1.3 |
| 4 | 1.1 | 1.4 | 2.3 | 2.4 | 2.3 | 2.3 | 3.5 | 1.9 | 1.5 | 1.3 | 1.2 | 1.3 |
| 5 | 1.0 | 1.3 | 2.5 | 2.5 | 2.2 | 2.2 | 3.1 | 1.8 | 1.3 | 1.4 | 1.2 | 1.3 |
| 6 | 1.0 | 1.3 | e3.0 | 3.4 | 2.2 | 2.1 | 11 | 1.7 | 4.0 | 1.3 | 1.2 | 1.2 |
| 7 | 1.1 | 1.3 | e30 | 19 | 2.8 | 2.4 | 34 | 1.6 | 1.7 | 1.3 | 1.2 | 1.2 |
| 8 | 1.1 | 1.3 | e5.0 | 13 | 3.2 | 2.5 | 13 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 |
| 9 | 1.1 | 1.2 | 23 | 4.8 | 2.8 | 2.2 | 4.9 | 1.5 | 1.5 | 1.3 | 1.2 | 1.2 |
| 10 | 1.1 | 1.3 | 6.1 | 3.7 | 2.5 | 2.1 | 3.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 |
| 11 12 13 14 15 | 1.1 2.0 1.4 1.3 1.3 | 1.6 1.5 1.3 1.3 | 3.9 3.2 2.7 2.3 2.1 | 3.7 3.3 13 6.6 4.1 | 2.3 2.3 3.7 3.6 3.2 | 2.1 2.1 2.0 1.9 1.9 | 3.1 2.8 2.6 2.3 2.0 | 1.5 1.6 1.6 2.2 1.7 | 1.7 3.3 1.9 1.6 1.5 | 1.8 1.4 1.5 1.6 1.7 | 1.2 1.2 1.2 1.2 1.3 | 1.2 1.2 1.2 1.2 2.2 |
| 16 | 1.2 | 1.3 | 2.0 | 3.3 | 2.9 | 2.3 | 1.9 | 1.6 | 1.4 | 1.5 | 1.3 | 1.3 |
| 17 | 1.2 | 1.3 | 2.0 | 2.8 | 2.6 | 2.0 | 1.8 | 1.5 | 1.4 | 1.4 | 3.7 | 1.1 |
| 18 | 2.9 | 1.3 | 1.9 | 2.7 | 2.4 | 2.0 | 1.8 | 1.5 | 1.4 | 1.4 | 1.4 | 1.1 |
| 19 | 22 | 1.4 | 1.8 | 2.5 | 2.3 | 2.0 | 1.7 | 1.9 | 1.5 | 1.9 | 1.3 | 1.1 |
| 20 | 2.7 | 1.3 | 2.0 | 2.4 | 16 | 2.0 | 1.7 | 1.7 | 1.4 | 1.4 | 1.2 | 1.1 |
| 21 | 1.7 | 1.3 | 1.9 | 2.3 | 9.8 | 1.9 | 1.7 | 1.6 | 1.4 | 1.4 | 1.2 | 1.1 |
| 22 | 1.4 | 1.3 | 15 | 2.2 | 5.3 | 3.7 | 4.1 | 1.5 | 1.4 | 1.4 | 1.2 | 1.1 |
| 23 | 2.0 | 2.7 | 16 | 2.1 | 3.9 | 7.0 | 2.1 | 1.5 | 1.4 | 1.4 | 1.2 | 1.1 |
| 24 | 2.1 | 13 | 4.2 | 2.1 | 3.3 | 3.4 | 1.8 | 1.5 | 1.4 | 1.4 | 1.2 | 1.1 |
| 25 | 1.9 | 2.5 | 4.6 | 2.0 | 2.9 | 3.1 | 1.7 | 1.4 | 1.4 | 1.3 | 1.2 | 1.8 |
| 26 27 28 29 30 31 | 2.4 3.4 2.1 1.8 1.7 1.6 | 1.9 2.2 2.0 2.2 42 | 2.8 2.4 2.3 2.3 2.3 2.2 | 2.0 1.9 2.0 3.4 2.6 2.3 | 2.6 2.5 3.2 | 2.7 3.3 5.6 4.2 3.5 3.1 | 1.9 1.7 2.1 2.8 11 | 1.4 1.4 1.4 1.4 1.4 | 1.4 1.5 1.4 1.4 | 1.3 1.3 1.3 1.3 1.3 | 1.5 1.4 1.4 1.5 23 2.2 | 1.4 1.1 1.1 1.1 1.1 |
| TOTAL | 69.9 | 98.2 | 165.2 | 125.4 | 100.0 | 84.9 | 148.2 | 52.2 | 49.4 | 43.6 | 64.2 | 37.6 |
| MEAN | 2.25 | 3.27 | 5.33 | 4.05 | 3.57 | 2.74 | 4.94 | 1.68 | 1.65 | 1.41 | 2.07 | 1.25 |
| MAX | 22 | 42 | 30 | 19 | 16 | 7.0 | 34 | 3.3 | 4.0 | 1.9 | 23 | 2.2 |
| MIN | 1.0 | 1.2 | 1.8 | 1.9 | 2.2 | 1.9 | 1.7 | 1.4 | 1.3 | 1.3 | 1.2 | 1.1 |
| CFSM | 1.39 | 2.02 | 3.29 | 2.50 | 2.20 | 1.69 | 3.05 | 1.04 | 1.02 | 0.87 | 1.28 | 0.77 |
| IN. | 1.61 | 2.25 | 3.79 | 2.88 | 2.30 | 1.95 | 3.40 | 1.20 | 1.13 | 1.00 | 1.47 | 0.86 |
| STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2005, BY WATER YEAR (WY) | | | | | | | | | | | | |
| MEAN | 2.25 | 3.27 | 5.33 | 4.05 | 3.57 | 2.89 | 4.59 | 2.66 | 1.85 | 1.60 | 1.64 | 1.19 |
| MAX | 2.25 | 3.27 | 5.33 | 4.05 | 3.57 | 3.05 | 4.94 | 3.65 | 2.05 | 1.79 | 2.07 | 1.25 |
| (WY) | (2005) | (2005) | (2005) | (2005) | (2005) | (2004) | (2005) | (2004) | (2004) | (2004) | (2005) | (2005) |
| MIN | 2.25 | 3.27 | 5.33 | 4.05 | 3.57 | 2.74 | 4.25 | 1.68 | 1.65 | 1.41 | 1.22 | 1.12 |
| (WY) | (2005) | (2005) | (2005) | (2005) | (2005) | (2005) | (2004) | (2005) | (2005) | (2005) | (2004) | (2004) |

CUMBERLAND RIVER BASIN

03433640 COPPERAS BRANCH NEAR KINGFIELD, TN—Continued

| SUMMARY STATISTICS | FOR 2005 WATER YEAR | WATER YEARS 2004 - 2005 | | |
|--------------------------|---------------------|-------------------------|--|--|
| ANNUAL TOTAL | 1,038.8 | | | |
| ANNUAL MEAN | 2.85 | 2.85 | | |
| HIGHEST ANNUAL MEAN | | 2.85 2005 | | |
| LOWEST ANNUAL MEAN | | 2.85 2005 | | |
| HIGHEST DAILY MEAN | 42 Nov 30 | 42 Nov 30, 2004 | | |
| LOWEST DAILY MEAN | 1.0 Oct 1 | 0.97 Sep 21, 2004 | | |
| ANNUAL SEVEN-DAY MINIMUM | 1.1 Oct 1 | 0.98 Sep 20, 2004 | | |
| MAXIMUM PEAK FLOW | 263 Oct 19 | 263 Oct 19, 2004 | | |
| MAXIMUM PEAK STAGE | 3.48 Oct 19 | 3.48 Oct 19, 2004 | | |
| ANNUAL RUNOFF (CFSM) | 1.76 | 1.76 | | |
| ANNUAL RUNOFF (INCHES) | 23.85 | 23.87 | | |
| 10 PERCENT EXCEEDS | 3.9 | 3.9 | | |
| 50 PERCENT EXCEEDS | 1.8 | 1.8 | | |
| 90 PERCENT EXCEEDS | 1.2 | 1.2 | | |

e Estimated



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